[redacted]

MVORCH CREEK LINE

MCULARA Subproject

At Date of Original Authorization	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
17 Aug 1960			1525-1008-1042	6370.00

Additional Authorizations	Period Covered	Time Extended To	Allotment Number	Amount of Obligation

Invoice Number	Date	Amount	Balance
# 1	12 Sept 1960	6370.00	- 0 -

[redacted]

119-2

[redacted]

TO: TSS/OC

1. Date of Obligation: N/A

2. Purpose of Project: To make a critical review of the literature and scientific development related to the interpretation of bioelectric signals from the human organism, and activation of human behavior by remote means.

3. Progress to Date: Satisfactory

4. Expiration Date: N/A

5. Project Monitor: [redacted]

A

FROM: TSS/CD

[redacted] C

[redacted]

SUB-PROJECT NO. 119

Objective and details of work if available:

Researcher to make "a critical review of the literature and scientific developments related to the recording, analysis and interpretation of bioelectric signals from the human organism, and activation of human behavior by remote means."

B

Where done: [redacted] Cover funding: [redacted]

Principal researchers/contractors: [redacted] C

Approximate time span: Sept 60-July 61 Approximate total funds: $6,370

When divorced from sponsorship was work classified? no, published? unk

What sponsors other than CIA are mentioned? None.

Names of CIA monitoring officers:

A [redacted], Gottlieb,

What aspects if any might be considered controversial?

Probably none. Researcher and university were unwitting.

Was project considered responsive to the [redacted] H

No.

119-4

C [redacted]

61/62 3,500.00 sent
61/62 850.00 sent

62/63 3,000.00

8 MAY 1955

[redacted] Pls give to

[redacted]

[redacted] We sent him the 3000 in Reserve & that is it! [redacted]

119-5

119

[redacted]

Grant Funds, Income and Expense
October 2, 1959-March 31, 1963

Grant Funds, Oct 2 '59-Jul 25 '61 $ 9,870.00

Preparation and Sale of 1961 Directory and Abstracts

Income from Sale of Books, Nov 2 '60-Aug 31 '61 $ 499.40

Expense, Oct 6 '59-Aug 31 '61

Salaries			
[redacted]	$ 1,000.00		
Research Assistants	5,195.85		
Typists, Clerks	1,359.13	$ 7,554.98	
Printing			
Bioelectronics Directory '61	$1,100.00		
Abstracts '61	1,408.00	2,508.00	
Other Expense			
Books and Reprints	$ 292.04		
Photocopy Supplies	38.50		
Photocopy Machine	250.00		
Expendable Supplies	287.15		
Postage	2.00		
Travel	487.15	1,357.14	11,420.12

I certify that services & materials have been satisfactorily received & the expenditures were incurred on official business.

[redacted]

Dates 5/9/63

Expense Exceeds Income from Sale of Books, Oct 2 '59-Aug 31 '61 10,920.72

Excess, Net Expense over Grant Funds, Aug 31 '61 $ 1,050.72

Preparation of 1963 Directory and Sale of 1961 and 1963 Books

Income from Sale of Books, Sep 1 '61-Mar 31 '63 $ 4,160.91

Expense, Sep 1 '61-Mar 31 '63

Salaries			
Research Assistants	$ 1,487.25		
Typists, Clerks	729.03	$ 2,216.28	
Advertising Expense		506.30	
Mailing Expense		307.71	
Other Expense			
Books and Reprints	$ 73.80		
Expendable Supplies	92.51	166.31	3,196.60

Income from Sale of Books Exceeds Expense, Sep 1 '61-Mar 31 '63 964.31

Net Excess of Expense over Funds and Income, Oct 2 '59-Mar 31 '63 $ 86.41

This is a true statement of expenses as reported to the Fund.

[redacted]

[redacted] B+C

119-5

Analysis of Income and Expense
October 2, 1959, Through March 16, 1965

	Oct 2'59 Aug 31'61	Sep 1'61 Mar 31'63	Apr 1'63 Mar 31'64	Apr 1'64 Feb 28'65	Mar 1'65 Mar 16'65	Total
Expense						
Personnel						
Professional Salaries	$ 1,000.00					$ 1,000.00
Research Assistants	5,195.85	$ 1,487.25	$ 1,925.85	$ 591.75		9,200.70
Typists, Clerk	1,359.13	729.03	500.50	1,260.66	$ 75.25	3,924.57
Total Personnel	$ 7,554.98	$ 2,216.28	$ 2,426.35	$ 1,852.41	$ 75.25	$ 14,125.27
Printing						
Bioelectronics Directory	$ 1,100.00		$ 745.00			$ 1,845.00
Abstracts '61	1,408.00					1,408.00
Total Printing	$ 2,508.00		$ 745.00			$ 3,253.00
Other Expense						
Books & Reprints	$ 292.04	$ 73.80	$ 7.00	$ 23.23		$ 396.07
Photo Copy Supplies	38.50					38.50
Photo Copy Machine	250.00					250.00
Expendable Supplies	287.15	92.52	173.31	30.94		583.91
Postage	2.00	307.72	93.27	15.00	.40	418.38
Travel	487.45					487.45
Advertising		506.30				506.30
Punch Cards & Accessories				140.73	39.82	180.55
Total Other Expense	$ 1,357.14	$ 980.32	$ 273.58	$ 209.90	$ 40.22	2,861.16
Total Expense	$ 11,420.12	$ 3,196.60	$ 3,444.93	$ 2,062.31	$ 115.47	$ 20,239.43
Funds						
B [redacted]	$ 9,870.00		$ 850.00			$ 10,720.00
Income from Sale of Books	499.40	$ 4,160.91	990.51	$ 251.00	$ 6.50	5,908.32
Total Funds	$ 10,369.40	$ 4,160.91	$ 1,840.51	$ 251.00	$ 6.50	$ 16,628.32
Funds Exceed Expense		$ 964.31				
Expense Exceeds Funds	$ 1,050.72		$ 1,604.42	$ 1,811.31	$ 108.97	
Net Excess Expense over Funds						$ 3,611.11

3-3-65

AMULTRA-119

119

ULTRA grant recd by HEF 9-29-60 6,370.00

[redacted] acctg begins 2 Oct 59 -- 25 Jul 61

Oct 60 2,470.00

Jan 61 2,000.00

Jul 61 3,500.00
1990

119-6

7350

134 - acctd for 22,000 grant (9-1-61 to 8-31-62)

111 ?

[redacted] ()

119-7

Purpose: To make a critical review of the literature and scientific developments related to the recording, analysis and interpretation of bioelectric signals from the human organism (MKULTRA 119)

Initiated: September 1960

Contractor: [redacted] D+C

Cost: $6,370.00

Status: Research completed and now being printed.

[redacted]

119-8

[redacted]

2 November 1965

MEMORANDUM FOR : Chief, [redacted]

SUBJECT : MKULTRA Sub-project 119

1. The present balance in the MKULTRA Sub-project 119 Memorandum Account (760.0) appears to be in error. Lack of documentation has prevented this office from making a complete analysis of this account. The outstanding balances of the many MKULTRA accounts were established on the Finance records based on an analysis preferred by your office. The work papers and other pertinent documentation is now on file in your office.

2. From the 760.0 account subsidiary ledger and the records here in TSD we are unable to determine exactly where a duplication of effort has been made. The records of the program manager indicate that the Sub-project 119 research program has been completed and that the final accounting has been rendered. It is requested that this account be reviewed and that action be taken, if appropriate, to close this account.

[redacted]
Chief, TSD/RDP

Distribution:
Original & 1 - addressee

[redacted]

119-9

[redacted]
(When Filled In)

No. 582

Cost Account 1125: 1009: 1902

Object Class

Date	Remarks and References	Obligations Incurred	Obligations Liquidated	Unliquidated Balance
12 SEP 1960	Wheeler Sub 119	6,370.00		6,370.00
14 SEP 1960	Invoice #1		6,370.00	—

[redacted]
(When Filled In)

119-10

17 August 1960

MEMORANDUM FOR: COMPTROLLER

ATTENTION : Finance Division

SUBJECT : [redacted]/MUFON, Subproject 119

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 119 has been approved and $6,370.00 of the over-all [redacted]/MUFON project funds has been obligated to cover the subproject expenses. This obligation of funds should be charged to Allotment Number 1/25-1000-1302.

[redacted]
Chief
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

[redacted]

Research Director

Date: 17 AUG 1960

I CERTIFY THAT FUNDS ARE AVAILABLE
OBLIGATION REFERENCE No. 502
CHARGE TO ALLOTMENT No.

AUTHORIZING OFFICER

Distribution:
Orig & 2 - Addressee
1 - TSD/OC
1 - TSD/FASS

[redacted]

119-11

[redacted]

12 September 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

[redacted] : KUBARK, Subproject 119, Invoice #1
Allotment Number 1545-1009-1902

1. Invoice No. 1 covering the above subproject is attached. Payment should be made as follows:

Cashier's check in the amount of $6,370.00 drawn on a [redacted] and payable to the [redacted]

2. The check should be forwarded to Chief, TSD/Research Branch, through TSD/Budget Officer, no later than Monday, 26 September 1960.

3. This is a final invoice. However, since it is anticipated that additional funds will be obligated for this project, the files should not be closed.

SIDNEY GOTTLIEB
Deputy Chief
TSD/Research Branch

Attached:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee [redacted]

CHECK [redacted] THE AMOUNT OF $6,370.00
RECEIVED 26 SEP 1960

[redacted]

[redacted] (when filled in)

CONFIDENTIAL FUNDS POSTING VOUCHER

VOUCHER NO. 7-12 | DATE 2-6 | VOUCHER NO. 7-12

DESCRIPTION-ALL OTHER ACCOUNTS 13-33 / DESCRIPTION-ADVANCE ACCOUNTS 13-27	28-33 V/A NO.: P.O. NO. / REQ. NO. DIV.	34-39 STATION CODE: PROP. NO. / PROJECT NO.	40-43 EXPEND CODE: YFY	43 FUNDS	45-46 PAY PER. LIQ. CODE	47-52 OBLIG. REF. NO.: ADVANCE ACCT. NO. / EMP. NO.	53 CA YR	54-57 GENERAL LEDGER ACCT. NO.	58-67 ALLOT. OR COST ACCT. NO.	62-67 CK. NO. / R REF. NO.	68-70 DUE DATE: OBJECT CLASS	71-80 AMOUNT: DEBIT	CREDIT
SUPPORT U.S. INVI			3411			5070	60	1.0 VC-1003-1902			250	637.00	
MKULTRA													637.00

EXPLANATION OF ENTRY: See Attach

TOTALS: 637.00 | 637.00

DATE: 19/2/60 | PREPARED BY: [redacted] | DATE | REVIEWED BY: [redacted]

CERTIFIED FOR PAYMENT OR CREDIT: DATE | SIGNATURE OF CERTIFYING OFFICER

FORM 10-55 606 USE PREVIOUS EDITIONS

119-12

[redacted] (NAME PRINTED IN)

ACCOUNTING BY INDIVIDUAL FOR ADVANCE

NOTE: Follow Instructions on Reverse

SUBMITTED BY: MAJORA Sub 219

VOUCHER NO. (Finance use only)

PERIOD OF ACCOUNTING

FROM: 2 October 1959 TO: 31 March 1963

RECEIPTS

1. CASH ON HAND BEGINNING OF PERIOD			$
1a.			
2. RECEIPT NUMBER	DATE	DESCRIPTION	
	2 Oct 1959	MAJORA Advance Perioo #1	
	[redacted]	— H	7,970.00

DISBURSEMENTS

3. VOUCHER NUMBER	DATE	DESCRIPTION	AMOUNT
			$
		Coo Attached Certification (n/c)	
		TOTAL EXPENSES	$ 7,970.00
		3a.	
		4. REFUNDED HEREWITH — CASH — CHECK — MONEY ORDER	
		5. CASH ON HAND END OF PERIOD	
		TOTAL ACCOUNTED FOR	$ 7,970.00

TOTAL TO ACCOUNT FOR: $ 7,970.00

I CERTIFY FUNDS ARE AVAILABLE

APPROVED

I certify that the expenditures listed hereon and on any attachments were incurred for official purposes of a confidential nature, that payment or credit therefor has not been received, and that this accounting is true and correct.

OBLIGATION REFERENCE NO.	CHARGE-ALLOTMENT NO.	DATE	SIGNATURE OF APPROVING OFFICER
502	2105-1390-2002		[redacted] COL, USA

DATE	SIGNATURE OF AUTHORIZING OFFICER	CERTIFIED FOR PAYMENT OR CREDIT: DATE	SIGNATURE OF CERTIFYING OFFICER	SIGNATURE OF PAYEE
	[redacted]	—	[redacted]	[redacted]

SPACE BELOW FOR EXCLUSIVE USE OF FINANCE DIVISION

PREPARED BY

REVIEWED BY

VOUCHER NO. 7-12

DESCRIPTION - ALL OTHER ACCOUNTS 13-33 / DESCRIPTION - ADVANCE ACCOUNTS 13-27	28-33 T/A NO. / P.O. NO. / DIV.	34-39 STATION CODE / PROP. NO. / PROJECT NO.	40-42 EXPEND CODE / FY	43 FUNDS	45-46 PAY PER. LIQ. CODE	47-52 OBLIG. REF. NO. / ADVANCE ACCT. NO. / EMP. NO.	53 CA YR	54-57 GENERAL LEDGER ACCT. NO.	58-67 ALLOT. OR COST ACCT. NO.	68-70 DUE DATE	71-80 AMOUNT DEBIT	AMOUNT CREDIT
										TOTALS		

FORM 8-63 282 USE PREVIOUS EDITIONS.

[redacted]

(1)

119-13

[redacted] (Month Filled In)

INSTRUCTIONS

1. If funds, in the form of other than U.S. Dollars were on hand, received, or disbursed during the accounting period, all pertinent data, i.e., rate, method of acquisition, etc., must be shown. If advances have been made to third parties, enter the total of such advances outstanding at the beginning of the accounting period on line 1a.

2. If more space is required to explain receipts, prepare receipt form, number and attach hereto. In every case, completely identify the source of receipts.

3. Attach a voucher for each expenditure and assign a number thereto in numerical sequence. The voucher may be the receipt obtained from the payee. When a receipt is not obtained, prepare a certificate and attach as a voucher. When space on form is not sufficient to list all vouchers, prepare a listing on a separate sheet and enter the total under item 3. If advances to third parties are outstanding at the close of the accounting period, attach an itemized list and enter the total on line 3a.

4. Final credit will not be given for disbursements which are advances to be accounted for. When accounting for advances are obtained, list as expenditures or refund of cash, as appropriate.

5. Total receipts entered on the line "Total to Account For" must agree with the total disbursements entered on the line following "Total Accounted For."

[redacted]

119-14

May 6, 1963

[redacted] A

Subject: Finances

1. Enclosed is accounting for [redacted] grant of the special $6,370 as well as the $3,500 from last year's fiscal grant money. They show a deficit and still haven't included the April 1963 printing and advertising costs or income from sales.

2. Enclosed is the accounting from [redacted] that shows a blance of $2,537.79 as an interim statement. He plans to have a full time technician this summer to work on the project and will report in September.

3. Only [redacted] left of the requested accountings. 136

119-15

RECEIPT

Receipt is hereby acknowledged of the following check:

[redacted] dated September 21, 1960, in the amount of $6,370.00, drawn on the [redacted]

Date: Sept 29, 1960

119-16

[redacted]

INVOICE

For Services $6,370.00

[redacted] B

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 1 applying to Subproject 119 of HUMRRO, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSD/RD, that this bill is just and correct and that payment thereof has not yet been made.

Deputy Chief, TSD/Research Branch

Date:

(2) It is hereby certified that this invoice applies to Subproject No. 119 of HUMRRO which was duly approved, and that the project is being carried out in accordance with the memorandum of 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

[redacted]

119-17

17 August 1960

MEMORANDUM FOR: COMPTROLLER

ATTENTION : Finance Division

SUBJECT : [redacted], Subproject 119

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 119 has been approved and $6,370.00 of the over-all [redacted] project funds has been obligated to cover the subproject expenses. This obligation of funds should be charged to Allotment Number 1525-1019-1502.

[redacted]
Chief
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

Research Director

Date:

Distribution:
Orig & 2 - Addressee
1 - TSD/OC
1 - TSD/FAS
2 - TSD/RB

TSD/RB[redacted] (17 Aug 60)

119-18

[redacted]

DRAFT [redacted]
17 August 1960

MEMORANDUM FOR: THE RECORD

SUBJECT : MKULTRA, Subproject 119

1. The purpose of this subproject is to provide funds for a study conducted by [redacted] to make a critical review of the literature and scientific developments related to the recording, analysis and interpretation of bioelectric signals from the human organism, and activation of human behavior by remote means. When initiated this study was being done on a consultant basis by [redacted] The reason for converting this into a Subproject is to provide more flexibility in the disbursal of funds for various kinds of assistance and equipment needed.

2. As indicated in the attached proposal this study is to provide an annotated bibliography and an interpretive survey of work being done in psychophysiological research and instrumentation. The survey encompasses five main areas:

a. Bioelectric sensors: sources of significant electrical potential and methods of pick-up.

b. Recording: amplification, electronic tape and other multi-channel recording.

c. Analysis: autocorrelators, spectrum analyzers, etc. and coordination with automatic data processing equipment.

d. Standardization of data for correlation with biochemical, physiological and behavioral indices.

e. Techniques of activation of the human organism by remote electronic means.

[redacted]

119-18

3. In lieu of higher overhead rates, title to any permanent equipment purchased by funds granted the [redacted] shall remain with the [redacted] B

4. The cost of the project will be $6,370, including $2,500 already allotted [redacted] as a consulting fee, for one year beginning 1 July 1960. This project will be handled as a grant-in-aid from the [redacted] and the handling of funds disbursed will follow the standard practice set up for that organization. Charges should be made against Allotment 1525-1009-1902. C B

5. [redacted] and others of the [redacted] who may become associated with the project will be completely unwitting of Sponsor. C & B

[redacted]

TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS: A

[redacted]

Research Director

Date: 7/7/60

Attached:
Proposal & Budget

Distribution:
Original Only

[redacted]

1/9-18

[redacted] Project

B
C

To make a critical review of literature and scientific developments related to the recording, analysis and interpretation of bioelectric signals from the human organism and activation of human behavior by remote means.

As it is visualized, the task should begin with a general survey of research and instrumentation in a number of fields, including neurophysiology, biophysics, anatomy, physiological psychology and neuropsychiatry, as well as electronics, telemetry and communications engineering. At the same time that bibliographic and related activity is initiated, correspondence should be undertaken with all laboratories, companies and agencies working in or carrying out activities related to designated areas of the broad survey problem. Visits to laboratories may be undertaken if needed.

The divisions of the problem fall naturally into five main areas: (1) bioelectric sensors: sources of significant electrical potential and methods of pick-up; (2) recording: amplification, electronic tape and other multi-channel recording; (3) analysis: autocorrelators, spectrum analyzers, etc. and coordination with automatic data processing equipment; (4) standardization of data for correlation with biochemical, physiological and behavioral indices; (5) technics of activation of the human organism by remote electronic means.

Progress has been made and the list of laboratories, investigators and resources in the Bioelectronic study is in preparation.

119-18

[redacted] B
a

Proposed Budget

Money forwarded from September 1959 through February 1960 This will be accounted for later.		$1900.00
Budget estimated for May 1 through Dec. 31, 1960		
Payroll - Honorarium and salaries	3,350.00	
Equipment and supplies	820.00	
Travel	300.00	4470.00
Total Budget		$6370.00

[redacted] D 119-19

3 August 1960

MEMORANDUM FOR: THE RECORD

SUBJECT : Approval of Project by [redacted] C & B

ATTENDANCE : Drs. Gottlieb, [redacted] A

SUMMARY : The proposal to formalize into a project work being done by [redacted] on a consultant basis was approved. C
A sum of $6,370, including $2,500 already allotted for consulting, will be funded through the [redacted] mechanism. B
[redacted] is not witting of Sponsor. C

General agreement was expressed that this survey would be very useful when complete. It was felt, however, that three points should be stressed with [redacted] with the last two being conveyed by him to [redacted] C

(1) This is a project with an end point. Any further proposals by [redacted] stemming from this project, would be reviewed separately on their own merits. C

(2) A deadline should be agreed upon for production of the survey -- probably March 1961.

(3) These funds include money for writing and publication and no further funds would be made available for this purpose.

Dr. Gottlieb and [redacted] who are meeting with [redacted] on 4 August, agreed to convey these points. C A

[redacted]
TSD/Research Branch

[redacted]

119-20

May 24, 1960

Memorandum to [redacted] A

Subject: Formalizing a proposal of [redacted] C B

Dear [redacted] A

Our work toward an annotated bibliography and an interpretive survey of work being done in psycho-physiology has progressed fairly well. We can now see the major portion of the problem and run a fair estimate of its costs. It is somewhat more expensive than we first contemplated. My first estimate was about $2,500.00 but more work is being done that must be evaluated than I realized. It now appears that the final cost will be about $6,370.00.

I do not believe it is appropriate to handle this kind of effort on a consultant's basis as we had originally intended. Instead, I think it should be established as a research task to be funded separately with perhaps some arrangement for intiating some research which appears to be of value after the survey has been reported next December. As I mentioned in my telephone conversation, sometime in late June [redacted] C will provide a listing of all of the laboratories and tasks which have come under review by his joint group of physicians, psychologists and engineers. Evaluation of the research will come later.

Attached is the budget. It is requested that the task be initiated prior to July 1.

[redacted] C

27 July 1960

[redacted]

Date Rec'd [redacted] Date Sent 1 Aug 60 1 Aug 60 15

Remarks Meeting 1300, Wednesday, 3 August in [redacted] office.

[redacted] A

1 119 C 119-21

February 25, 1960

[redacted] C B

Dear [redacted] C B

My meeting with the [redacted] people was interesting indeed. I am quite sure they are going to initiate some work in this area, and I feel they will have great competence to bring to bare, particularly in the analysis area.

Enclosed is a check in the amount of $1,000.00, as I promised. In consideration our efforts for the next few weeks and the probable level of cost, do you feel that our original estimate of $3,500.00 is going to be adequate? Give some thought to this and after my return next month we will discuss whether we should formalize this work as a project. I am somewhat concerned with the magnitude of the task and with the need for interim guidance, although, the telephone conversation with you was very helpful.

I am enclosing a copy of the letter from [redacted] and as I mentioned to you B
in our conversation, I would appreciate your advice before I reply. The third enclosure "Report of the Special Committee" is for your information.

Best regards.

Sincerely yours,

[redacted] C

Encl: 3

119-22

December 24, 1959

[redacted] C
} B

Dear [redacted] C

Thank you for your very informative letter. It sounds to me as though you are making progress and, further, that you are enjoying it. This is always rewarding to me.

C
[redacted] have had no time at all to draw up a report on our visit to [redacted] but I should at least have commented on our lack of findings to you. The only work we saw in a relevant area was at the [redacted] F
[redacted] where they are experimenting with continual blood pressure sensing and recording equipment. I am writing them to obtain more information about their equipment for including in your survey and will forward it when it comes. [redacted] are doing some work on flicker fusion but at a comparatively mundane level. However, I feel that you should open correspondence with [redacted] when your work is a little further along. We found that his laboratory has a very advanced and highly portable recording device manufactured by [redacted] (see the enclosed specimen of tape which uses a jet ink spray instead of pins, much more trouble free) but we didn't have the name of the manufacturer. That will have to be obtained from further correspondence. From the standpoint of psycho-physiology our visit was not too productive. It was generally rewarding and instructive, however, and enabled us to meet a lot of people that we had heard much about.

Enclosed is our check for another $500.00. I should think that the arrangement of letting the [redacted] hold the receipts for expenses will be perfectly satisfactory for my accounting purposes. However, I will require a statement at the end of the project.

Thanks again for your very fine progress report. It sounds to me as though you are busy and I think you are wise to get your work well organized as you grow rather than to become over committed.

May the holiday season and the New Year be happy and productive for you and [redacted]

Sincerely yours,

[redacted] C

Enclosure

119-23

22 December 1959

Dear [redacted]

I have intended for some time to send you a progress report on the study of bioelectronic phenomena. There have been many pressures in relation to writing it, but the work has proceeded very well. For your information the pressures have related to the initiation of our new Ph.D. program and the completion of the two books on which I have been slaving. [redacted] is now in the publishers hands and will be released by [redacted] next summer. [redacted] is nearing completion and I hope to make my latest deadline to enable its release in Spring 1961.

We have divided the bioelectronic study into 4 phases: organ systems generating electric potentials, recording, analysis, and behavioral correlates. Each of these is further subdivided, of course.

Up to this time we have had a group of 4 professional persons: [redacted] and me, meeting regularly to discuss our current accumulations and digests; we have employed two students to do abstracting and bibliographic searching; and we have conducted an extensive correspondence including the gathering of a stock of relevant reprints and catalogs. We have also purchased a small amount of literature.

My total expenditures to date are under $300. We have now reached a point where we are in a position to move more intensively on a number of issues and I have asked [redacted] to devote a major part of his time to the project, in consideration for which he is to receive $3000. This will be a very efficient arrangement and will enable us to have a highly qualified psychologist working continuously and intensively with our student assistants and consulting with me and the working group.

We are planning on [redacted] on the problem and also a mid-year conference, all on our original budget, but the plans for the latter are not yet firm. Our target date for the final report is the end of 1960.

If you wish, I will send you the bills for our further expenses, to be disbursed by your office. However, it is somewhat more convenient to deposit the funds with the [redacted] and send the bills and invoices to them. Unless I hear from you on this, I will assume that you prefer the former arrangement.

119-23

Did you find out anything of value for us in [redacted] I had been looking forward to some news from you or [redacted] and this is probably one of the reasons why I have not written sooner.

I would also like to explain why I have not submitted a proposal for my "situational variables" study. The principal reasons are two: First, I decided that you might have more confidence in our performance if we waited until we finished the present small study; Second, I have been anxious to avoid getting over-committed. Most of my earlier applications for research grants have been coming through and we may face the problem of staffing them adequately unless we proceed carefully. We are treating your present grant as a major area of responsibility, which fits in with a number of collateral interests here of which you know. I have gone ahead with the planning of the situational variables project and hope to get it actually under way within the next year.

Our new staff members [redacted] are working out splendidly and we hope to add two more men of their caliber this year. In short, things are working out very well at [redacted] and we are slowly, but surely moving toward our goal [redacted]

Please extend our warm greetings to [redacted] and to the members of your staff. Should you return to these parts, we would remind you of a standing invitation to visit.

With cordial greetings to you and your family from [redacted] and me,

Very Sincerely,

[redacted]

Consultant 119-24

[redacted] B

October 2, 1959

[redacted] C B C

Dear [redacted]

Thank you for your letter of 29 September and the enclosed check which we have deposited with the [redacted] B We have all ready started the work on the project and I hope that we may have some tangible progress to report within a few months.

With best wishes for your trip.

Cordially,

[redacted] C

[redacted] C

4/9-245

[redacted] B

Consultant

September 25, 1959

[redacted] C B

Dear [redacted] C

Thank you for your letter of 21 September. I am very pleased that the proposal to survey the literature on bioelectric phenomena is approved and we will make plans immediately to proceed as far as possible. The financial arrangement you suggest seems to me to be quite adequate. However, if any problems arise I can write to you concerning them.

As I mentioned in my last letter, [redacted] asked me to keep D quiet about the use of the new seismic analyzer until he has cleared it with the other interested parties. As I understand it this project is supported by a number of major oil companies and he has to have some clearance to avoid violation of agreements. As soon as I hear from him again I will let you know and I will keep you as closely informed as possible on this matter.

While you are abroad it would be quite helpful if you could do the following in relation to this project: (a) Get names of individuals or laboratories engaged in interesting work related to our broad objective, (b) Have us placed on as many pertinent mailing lists as you may be able to do and secure any useful reports or references as you may find, (c) Find out who is regarded as a "leading authority" in each country that you visit.

Finally, it would be helpful if you could send me an advance of four or five hundred dollars made out to [redacted] care of me as principal B investigator, for the purpose of purchasing materials and organizing the bibliographic phase. Our practice in such matters is to deposit the funds in our business office and to keep a detailed accounting of all expenditures.

I hope you enjoy the trip to Europe and find it as profitable as I expect you will. Our best wishes to [redacted] I hope to have my other proposal in form by the time you return. However, we have been slightly delayed by routine matters incident to starting the new school year.

With best wishes and appreciation.

Cordially,

[redacted]

[redacted]

119-26

September 21, 1959

[redacted] C B

Dear [redacted] C

As I promised last week, I have obtained permission to utilize administrative funds for the proposed survey of the literature up to $3,500.00. I suggest that we hold the funds here until you require them for specific purposes, and that we respond to vouchers and receipts sent by you for repayment, or that you make specific requests when funds are needed for purchase of equipment, repayment for labor or for consulting fees. In this way we can avoid the formality of corporate involvement and the time delays that this always entails.

If there are disadvantages to you in the above arrangement I am sufficiently flexible to arrange this expenditure in any way you see fit. Please let me know your wishes in the matter.

I am very much impressed by your account of your conversation with [redacted] D It sounds to me as though his analyzer is the most advanced being considered for employment in behavioral science at the moment. I feel you should pursue this aggressively and let me know how we can assist. If you have the opportunity I would like also to have some information about [redacted] to use in my conversations with instrument people here. D

We are busily making plans for our trip to [redacted] It appears that we shall depart October 4, return October 31, most of our time will be spent in [redacted] F with a stop at the [redacted] on October 18. B Let me know if you think of any way that I can do something for you in [redacted]

Sincerely yours,

[redacted] C

119-27

[redacted] B

September 16, 1959

[redacted] C B C

Dear [redacted]

Thank you for your letter of 4th September. I have just returned from meeting with the [redacted] B and there is a strong possibility of a development [redacted] which greater importance than that which I requested in my letter to him of which you received a copy. [redacted] D requested that this not be discussed until further administrative appr is given. However, his organization has completed the construction of a new seismic analyser which can handle auto correlation, cross correlation, powe spectra and other advanced analyses of wave signals for 32 channels simulta ously. When I finished describing the purposes of my research he understo the problem better than I did and outlined the entire analysis. He is investigating the possibility of programming time for us on this machine to analy tape-recorded EEG records. I believe that we will also be able to receive some financial help from them concerning the instrumentation of the tape r cording of EEG records.

This afternoon I spoke on the telephone with [redacted] C B C who is writing a chapter in [redacted] book, is an internationally known psychologist and is very much interested in the wo that we are taking. He may very likely be a source of further support fo the research once we get the preliminary work out of the way.

I never got to [redacted] and I would most certainly have enjoyed meeting the two with you, [redacted] appreciated your comments about the [redacted] and joins me in best wishes. Please remember me to [redacted] and tell him that I am going to send a bundle of my data and reading material in the very near future. } C

With many thanks and best wishes,

Cordially,

[redacted] C

119-27

[redacted] B

September 8, 1959

[redacted] C B

Dear [redacted] C

Thank you for your letter of 4th September. I have just returned from meeting with the [redacted] and there B
is a strong possibility of a development of which greater importance than that
which I requested in my letter to him of which you received a copy. [redacted] D
[redacted] requested that this not be discussed until further administrative appr
is given. However, his organization has completed the construction of a new
seismic analyzer which can handle auto correlation, cross correlation, pow
spectra and other advanced analyses of wave signals for 30 channels simulta
ously. When I finished describing the purpose of my research he understo
the problem better than I did and outlined the entire analysis. He is in
gating the possibility of programming time for us on this machine to analy
tape-recorded EEG records. I believe that we will also be able to receiv
some financial help from them concerning the instrumentation of the tape
cording of EEG records.

This afternoon I spoke on the telephone with [redacted] C
[redacted] B
[redacted] who is writing a chapter in [redacted] book, is an C
internationally known cardiologist and is very much interested in the appl
that we are taking. He may very likely be a source of further support in
the research once we get the preliminary work out of the way.

I never got to [redacted] and I would most certainly have enjoyed talkin
the [redacted] with you. [redacted] appreciates your comments about the [redacted] and } C
Join[redacted] me in best wishes. Please remember me to [redacted] and tell him that I am
going to send a bundle of reprints and reading material in the very near
future.

With many thanks and best wishes,

Cordially,

[redacted] C

11928

September 14, 1959

[redacted] C

B

Dear [redacted] C

I am sorry that I missed you on Monday night. Apparently, you had gone into the restaurant and I thought you had left the hotel. You would have been a big help to me on my tour of [redacted] C

The letter arrived and I am sure it will suit my purposes. I should have word for you before the end of the week.

Best regards to your charming wife. Tell her I have chuckled again about the geese.

Sincerely yours,

[redacted] C

119-29

Memorandum:

Enclosed is a copy of a proposal which is pending with [redacted]. I have just received an invitation to meet with [redacted] on September 17th.

3B1

C

119-30

[redacted] B

September 10, 1959

[redacted] C B

Dear [redacted] C

We were delighted with your recent visit and the opportunity to discuss research plans and areas of mutual interest.

One of the projects on which we are prepared to begin immediately is a critical review of literature and scientific developments related to the recording, analysis and interpretation of bioelectric signals from the human organism and activation of human behavior by remote means.

I have discussed this project with my long-time collaborator, [redacted] and with two colleagues at [redacted] whose interests and experience are closely related to this area. [redacted] C

[redacted] and is also [redacted] The other is [redacted] field of interest is [redacted] The participation of all four of us would be without compensation, although a small budget is required for some limited travel, consultation, correspondence, library assistance and typing.

As we visualize the task, it should begin with a general survey of research and instrumentation in a number of fields, including neurophysiology, biophysics, anatomy, physiological psychology and neuropsychiatry, as well as electronics, telemetry and communications engineering. At the same time that bibliographic and related activity

is initiated, correspondance should be undertaken with all laboratories, companies and agencies working in or carrying out activities related to designated areas of the broad survey problem. Visits to laboratories may be undertaken if needed.

It appears that about mid-way through the study, a conference may be valuable to discuss the material accumulated and the problems formulated, as a guide to future research and development. This conference is not budgeted at present, but might be kept in mind for planning purposes. At this time we are not prepared to suggest names of conferees, since we believe that the present list should undergo modification in the survey.

The divisions of the problem fall naturally into five main areas: (1) bioelectric sensors: sources of significant electrical potential and methods of pick-up; (2) recording: amplification, electronic tape and other multi-channel recording; (3) analysis: autocorrelators, spectrum analyzers, etc. and coordination with automatic data processing equipment; (4) standardization of data for correlation with biochemical, physiological and behavioral indices; (5) technics of activation of the human organism by remote electronic means.

Initially we believe that a comprehensive report could be completed within 12 months, with a total budget of $3500. One thousand dollars would represent the cost of a part time stenographer-typist. About $800. is contemplated for consultation, $500. for travel, and the balance for reference materials, bibliographic assistance and library services.

In the event that you desire more detailed information on any part of this proposal, please let me know.

Cordially,

[redacted]

[redacted]

119-31

B

Research proposal to [redacted] July 1, 1959

For the past nine years, I have maintained a continuing interest in certain problems in electroencephalography, which have both psychophysiological and medical application. This research started while I was [redacted] and has been conducted jointly with [redacted] We have investigated electrical potentials recorded from the brains of psychiatric patients and normal subjects in relation to psychological, neurological, and induced stress factors and have been interested in the use of electronic analysers for diagnostic and scientific interpretation of the recorded brain waves. In the course of this work, several electronic analysers were built with [redacted] and provided impressive results despite their crudeness and obvious limitations.

C/B

C

Those instruments are basically frequency analysers which provide information concerning the total amount of electrical activity recorded for a single channel, during a ten second epoch, by frequency bands. While I was at [redacted] the pressure of directed research requirements prevented further work on the development of an improved electronic analyser.

B

Yet, it was apparent that the equipment mentioned above was useful only in certain limited research problems and was inadequate to handle multi-channel recordings under longer time periods, needed both for more complex research and diagnostic applications. The diagnostic problem are of particular importance in medicine and psychiatry inasmuch as the only method available at present is visual reading of clinical records, which is both unreliable and inaccurate, and resembles the clinical interpretation of projective techniques in psychology.

In my opinion the development of an adequate multi-channel electronic analyzer for electrical signals from the brain and other systems of the human organism is one of the most important needs in these fields today.

Two developments within the past few years have spurred my interest in this problem. One was the demonstration that EEG records could be recorded on magnetic tape with high fidelity by means of frequency modulation techniques. The second was the fact that electronic scientists have developed excellent quantitative techniques for analyzing and interpreting electrical signals obtained by telemetry from rockets and satellites used in ballistic missiles and space programs.

In 1957 and 1958 I worked intensively with [redacted]. Together we worked out plans for this recording eight or more channels simultaneously and sounding them so that a number of analyses of these records, not possible with previous analyzers, could be made. I am enclosing a copy of a proposal prepared by [redacted] for development of equipment along the lines that he suggested, but which we were unable to carry forth at the [redacted].

Subsequently, I corresponded and had several conferences with [redacted] who indicated that certain equipment built by their company would also be profitable in this research. Such equipment included the [redacted]

I have also corresponded with the [redacted] and there a number of related suggestions were obtained with regard to analog computers, cathode-ray tubes, and suggestions concerning meaningful types of information to consider.

At this time I have available a colleague who is trained in electroencephalographic recording, and the cooperation of [redacted] as a consultant. In addition, arrangements can be made with several research facilities for direct telemetering of EEG data patients. The project that I am interested in embodies two aspects a long-term research program which would involve the following phases:

1) Development of a research analysis to extract relatively complete and meaningful information from the entire EEG record for substantial time periods up to about an hour;

2) Standardization of quantitative variables in terms of analyzer units of measurement;

3) Investigation of clinical electroencephalographic entities using the analyzer techniques developed in phases 1 and 2, to discover correlations between [illegible] with these entities, as a basis for a [illegible] and ratio applications of the electroencephalographic technique.

4)

4) A research program in psycho-physiology to investigate psychological and physiological correlates of electrical signals from the human brain.

Although it is not within my own sphere of interest or competence, it may be noted that such equipment would also have extremely important application to such fields as electrocardiography and other techniques involving electrical signals.

With this background, I am very much interested in finding out whether [redacted] through any of its scientific divisions and research foundation, would be able to assist in the organization, development, and equipping of a laboratory in which the research outlined above could be conducted. It is my opinion that if a satisfactory "atlas," for automatic interpretation of the EEG in relation to psychiatric and neurologic diagnoses, could be devised and keyed to an appropriate analyzer, the demand for this equipment from hospitals and clinics throughout the United States, and in fact the entire world, would be almost unlimited. My specific needs at this time include:

1) technical assistance in designing the principal components of an analyzer for an eight channel EEG record; and

2) a grant of equipment for such components of the analyzer as [redacted] may be able to contribute. My estimate is that the analyzer may cost around $10,000. I have had some encouragement from [redacted] that assistance from his company might be provided once the project got seriously underway, and there is a good possibility of [redacted] support on the same basis.

At this time, [redacted] is moving ahead rapidly in setting up a doctoral program in psychology and in the construction of several new buildings, in one of which the new psychology laboratories will be housed. It is my plan to locate the EEG laboratory and equipment in one of the new buildings, and I need not emphasize that any assistance we might obtain in this connection would contribute materially to this development and strengthening of our new doctoral program.

119-32

August 17, 1959

[redacted]

Dear [redacted]

I will be receiving [redacted] In view of the fact that I am planning a day behind, I would like to move [redacted] Thursday night for [redacted] I would appreciate an opportunity to see the place at [redacted] and to visit as long as possible with you and [redacted] I am sorry that I won't be able to spend the night and take advantage of your hospitality.

I would appreciate it if you could make a reservation for me from [redacted] on Thursday night, the 27th. I don't rather, having as much time for discussion as we can squeeze out of the schedule.

I am looking forward to seeing you.

Sincerely,

[redacted]

11-9-33

August 10, 1959

[redacted]

Dear [redacted]:

Right after my return from two weeks at the [redacted], I decided to expose a virus I had picked up to as much salt water, air and sunshine as [redacted] could produce, hence, the procrastination.

I should be happy, indeed, to process a research proposal from you and feel that the work you have in mind does certainly fall within the interests of our Board of Directors. While we have had very few grants that exceed $15,000, I think that it is certainly possible to consider and would not let budgetary considerations control the research plan, at least in the beginning.

I shall be on my way to the [redacted] next week and plan to stop by in [redacted] to see my father who is critically ill and felt that it might be possible for me to stop by [redacted] on the 19th or 20th of August for a conversation and a nice long discussion of plans. Do you plan to be in [redacted] at that time?

Best regards.

Sincerely yours,

[redacted]

Enclosure

119-34

July 22, 1959

[redacted] C B

Dear [redacted] C

[redacted] has been out of town but expects to return before the end of July. Your letter is being held for his attention, and I am sure you will be hearing from him shortly.

Sincerely yours,

[redacted] C

119-35

July 14, 1959

Dear [redacted]

1. Thank you for sending me your June 1959 report which is most interesting and informative. By coincidence, it arrived just as I was drafting a letter to you to inquire concerning the possibility of my applying for a [redacted] grant, for a project which I mentioned to you briefly at the [redacted] last year, and on which I have done considerable background work during the past year with some modest support from the [redacted]. The problem is a basic one in the field of [redacted] and is concerned with the dimensions of the stimulus situations in human behavior.

2. It has long been my opinion that there is a need for a taxonomy of stimulus variables, comparable to those with which we are familiar for personality, to account for factors external to the individual, which affect his performance. People are constrained, pressed, required, etc. to do things because of factors in their environment, perhaps even more than because of the kinds of personalities they are. Furthermore, a stimulus situation is complex, and reflects many subtle variables that are not always uniformly or clearly identified, and whose effects may often be overlooked. If we are to be able to study human behavior effectively, we must measure the situations to which people respond as well as the people who respond.

3. During the past year I have made an extensive review of relevant literature on this problem, with the help of a graduate assistant supported by the [redacted] and worked out a tentative research design. The conceptual formulation is in terms of environmental effects on human behavior as a set of variables describable as

"environmental traits." At present I am thinking in terms of two main divisions: (1) the life space of the individual, and (2) the immediate task situation. I have progressed to the point of developing a preliminary classification of research variables and data collection plans. The principal methodology for reduction of data will be cluster analysis and later, factor analysis.

4. I have in mind working with four kinds of group situations - school, hospital, business and industrial, and could include a local military organization as well.

5. I am planning to make this project my main research interest for the next several years and have an excellent situation here from the standpoint of interested colleagues in related fields, student assistants, and institutional material to carry out such research. In the event that you might be interested, it would be helpful to me to know whether a budget of about fifteen thousand dollars ($15,000) would be feasible to consider.

This has been an eventful year, moving and getting organized; but it is now behind us, and I am looking forward to a productive future in this setting. With best wishes and appreciation,

Cordially,

[redacted]

[redacted] C